

### **Remarks/Arguments**

#### **The Rejection of Claims 1, 3, 8, 18 and 20 Under 35 USC §102(b)**

In the Office Action of August 2, 2005 Examiner rejected Claims 1, 3, 8, 18 and 20 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3572888 (Kawashima). Applicants respectfully traverse this rejection and requests reconsideration.

Applicants courteously point out that Claim 1 has been amended to recite that a drive means for the carriage and the stage are shielded by the bottom side of the stage throughout the full range of motion of the carriage and the stage. Also, the carriage and bearings for the carriage are shielded by the bottom side of the stage throughout the full range of motion of the carriage and the stage. Shielding of the carriage and bearings for the carriage by the bottom side of the stage in the manner recited is fully supported by the existing written description and drawings in Figures 3, 4, 5, 6, 7, 8 and 10, and in paragraphs [0028] and [0031]. Shielding of the drive means for the carriage and the stage by the bottom side of the stage in the manner recited is also fully supported by the existing written description and drawings as represented in Figures 3, 4, 5, 6, 7, 8 and 10, and in paragraphs [0013], [0027] and [0031]. These features are not disclosed by Kawashima.

#### **Kawashima fails to disclose a drive means for a carriage and a stage that are shielded by the bottom side of the stage throughout the full range of motion of the carriage and the stage**

Each and every element of the invention as claimed must be found in a single prior art reference in order for a claim to be anticipated. Applicants respectfully submit that the '888 patent fails to teach every element of the claimed invention as recited in Claim 1. Particularly, Kawashima fails to disclose a drive means for the carriage and the stage that are shielded by the bottom side of the stage throughout the full range of motion of the carriage and the stage.

Kawashima discloses a drive mechanism that uses a gear system that is entirely exposed to dust and debris as shown in Fig. 2 of the '888 patent. (See Appendix - Figure 2 from

Kawashima). Claim 1 recites the limitation that the drive means of the carriage and the stage are the **shielded** by the bottom side of the stage throughout the full range of motion of the stage and carriage. Kawashima **fails to teach or disclose** that the drive means is shielded by the bottom side of the stage throughout the full range of motion of the stage and a carriage.

In Figure 2 of Kawashima it is apparent that the main elements of the drive means, gears 22 and 24, both extend out from under the bottom side of the stage and are therefore exposed to dust and debris in the surrounding lab environment. Kawashima shows an arrangement that has the drive means for the stage exposed when the stage is viewed from a position above the stage. Gears 22 and 24 are obviously protruding out from the bottom side of the stage, i.e., unshielded. The farthest edge that can still be construed to be the edge of the stage is the edge of scale 8. A dotted line drawn perpendicular with this edge clearly indicates that gears 22 and 24 are protruding from under the bottom side of the stage of Kawashima. (See Appendix - Figure 2 from Kawashima) Also, the other portions of the drive means, handles 23 and 19 are protruding from under the stage of Kawashima. This exposure will lead to the accumulation of dust and debris in the drive means of the stage. Gears 22 and 24, i.e., part of the drive means, are not shielded by the bottom side of the stage. Dust and debris accumulating on gears 22 and 24 can transfer that dust to the inner most gears 25, 27, 29, 30 and 31. Over time this accumulation of dust and debris will cause the entire gear system disclosed in the '888 patent to become dirty, leading to reduced performance of the drive means. This is exactly what the drive means and stage arrangement of the instant application addresses. By placing the drive means for the carriage and the stage under the stage throughout the full range of motion of the stage and carriage dust and debris is less likely to foul the drive means. Accordingly, the drive means of Kawashima cannot be equated to be a drive means recited in Claim 1. (See Appendix - Figure 2 from Kawashima). Therefore, Kawashima fails to teach all the limitations of Claim 1 and that claim has not been anticipated.

**Kawashima fails to disclose a carriage and bearings for said carriage that are shielded by the bottom side of the stage throughout the full range of motion of the carriage and the stage**

Each and every element of the invention as claimed must be found in a single prior art reference in order for a claim to be anticipated. Applicants respectfully submit that the '888 patent fails to teach every element of the claimed invention as recited in Claim 1. Particularly, Kawashima fails to disclose bearings for the carriage that are shielded by the bottom side of the stage **throughout the full range of motion of the carriage and the stage.**

Bearing balls 6 and 16 of Kawashima have been cited as teaching the bearings of Claim 1. However, Claim 1 now recites the further limitation that the carriage and the bearings for the carriage are shielded by the bottom side of the stage throughout the full range of motion of the stage and the carriage. For example, if carriage 30 of the present application is moved to the far left of the stage or to the far right of the stage, the bearings 64 and 65 and carriage 30 remain shielded by the bottom side of the stage, i.e., shielding during the full range of motion of the stage and carriage.

Bearing balls 6 and 16 have been cited by the Examiner as the structure that is equivalent to the bearings recited in Claim 1, but bearing balls 6 are not associated with a structure like the carriage recited in Claim 1 so they are not equivalent to recited bearing and are irrelevant. Claim 2 expressly recites that the **carriage bearings** are shielded by the bottom side of the stage **not just any bearings.**

At first blush slide member 15 and its bearing balls 16 look to be structurally similar to the carriage recited in Claim 1. However, it is evident from Figure 4 and the associated description in Kawashima the **sliding member 15 and bearing balls 16 will not be shielded by the bottom side of a stage throughout the full range of motion of the carriage and the stage.** (See Appendix – Figure 4 from Kawashima) As can be seen in Figure 4, pin 17 is placed within the middle of sliding member 15 and without any other direction it is logical to presume that pin 17 would be the stopping point for sliding member 15 as it is slid to the left and the right. The length of sliding member 15 would lead to it extending out from under the stage leading to

exposure of sliding member 15 and its bearing balls to dust and debris. This arrangement is inferior to the arrangement claimed because dust and debris can foul the bearings and hinder performance of the sliding member's movement. The specification of the instant application stresses the importance of shielding the bearings and the drive system from dust and debris since regular cleaning of these parts can be time consuming and failure to do regular cleanings will cause the performance of the microscope to greatly diminish.

In response to arguments filed June 1, 2006 the Examiner argued that Kawashima discloses bearings that are disposed under the stage and shielded by the bottom of the stage. This generalization that any bearings on the stage were equivalent to the bearings recited in Claim 1 was an incorrect interpretation of Claim 1 and Kawashima. Applicants ask that the Examiner notice the blatant differences between bearings placed at any point on a microscope and those that are associated with a specific part. **The bearings recited in Claim 1 are not just bearings under a stage, but they are bearings associated with a carriage that are shielded throughout the full range of motion of the carriage and stage.**

Therefore, the carriage and carriage bearings recited in Claim 1 that are shielded by the bottom side of the stage throughout the full range of motion of the carriage and stage are not taught by Kawashima and Claim 1 is not anticipated.

Slide member 3 and bearing balls 4 in Kawashima are also not an equivalent structure to the carriage recited in Claim 1. Bearing balls 4 for slide member 3 and the slide member itself are not equivalent to the carriage and bearings recited in Claim 1 because **ball bearings 4 and slide member 3 are not shielded by the bottom side of the stage throughout the full range of motion of the carriage and stage.** Not only is slide member 3 not covered throughout its full range of motion it is not covered by a stage even during part of its range of motion. Slide member may be covered for part of its range of motion by clamping holder 2. The clamping holder 2 is not a stage as recited in Claim 1. **(See Appendix - Figures 3 and 5 of Kawashima).**

Applicants submit that for all of the above reasons independent Claim 1 is novel, and thus respectfully request reconsideration and withdrawal of the rejection.

Claims 3, 8, 18 and 20, which depend from Claim 1 either directly or indirectly, and incorporate all the limitations of Claim 1, are also novel. Applicants respectfully request reconsideration and withdrawal of the rejections to Claims 1, 3, 8, 18 and 20 and passage to allowance of those claims.

**Claim 36**

**Kawashima fails to disclose a drive means for a stage that is completely shielded by the bottom side of the stage, relative to said stage being viewed from a position above said stage, throughout the full range of motion of the stage.** Kawashima shows an arrangement that has the drive means for the stage exposed when the stage is viewed from a position above the stage. Gears are obviously protruding under the bottom side of the stage. **(See Appendix – Figure 2 of Kawashima)** The farthest edge that can still be construed to be the edge of the stage is the edge of scale 8. A dotted line drawn perpendicular with this edge clearly indicates that gear 22 and 24 are protruding from under the bottom side of the stage of Kawashima. Also, the other portions of the drive means, handles 23 and 19 are protruding from under the stage of Kawashima. Clearly, the drive means structure of Kawashima is not equivalent to the drive means structure of Claim 36. For that reason, Claim 36 is not anticipated.

**The Rejection of Claims 9, 10, 13, 15 and 24 Under 35 USC §102(b)**

In the Office Action of August 2, 2005 Examiner rejected Claims 9, 10, 13, 15 and 24 under 35 U.S.C. §102(b) as being anticipated by Kawashima. Applicants respectfully traverse this rejection and requests reconsideration.

Applicants courteously point out that Claim 1 has been amended to recite that the drive means for the carriage and stage are shielded by the bottom side of the stage throughout the full range of movement of the carriage and the stage, and the carriage and bearings for the carriage are shielded by the bottom side of the stage throughout the full range of movement of the carriage. It has been noted above that these amendments are fully supported by the original specification.

It has been shown *supra* that because Kawashima fails to disclose a microscope stage assembly that has a carriage and bearings for that carriage that are shielded by the bottom side of the stage throughout the full range of motion of the carriage and stage Claim 1 is novel. Claims 9, 10, 13, 15 and 24 are dependent on Claim 1, and thus by their dependency, adopt all the claim limitations recited in Claim 1. Therefore, Claims 9, 10, 13, 15 and 24 are also novel and Applicants respectfully request withdrawal of the rejection of those claims.

The Rejection of Claims 11, 12, 14, 16 and 25 Under 35 USC §102(b)

In the Office Action of August 2, 2005 Examiner rejected Claims 11, 12, 14, 16 and 25 under 35 U.S.C. §102(b) as being anticipated by Kawashima. Applicants respectfully traverse this rejection and requests reconsideration.

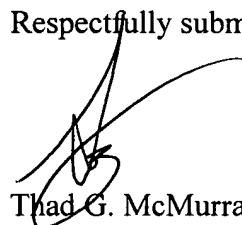
Applicants courteously point out that Claim 1 is novel due to the amendments shown above. It has been shown above that because Kawashima fails to disclose a microscope stage assembly as described above Claim 1 is novel. Claims 11, 12, 14, 16 and 25 are dependent on Claim 1, and thus by their dependency, adopt all the claim limitations recited in Claim 1. Therefore, Claims 11, 12, 14, 16 and 25 are also novel and Applicants respectfully request withdrawal of the rejection of those claims.

Attorney Docket No. LEAP:133US  
U.S. Patent Application No. 10/810,979  
Reply to Office Action of August 1, 2006  
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**Conclusion**

Applicants respectfully submit that the present application is now in condition for allowance, which action is courteously requested. The Examiner is invited and encouraged to contact the undersigned attorney of record if such contact will facilitate an efficient examination and allowance of the application.

Respectfully submitted,



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**Appendix**